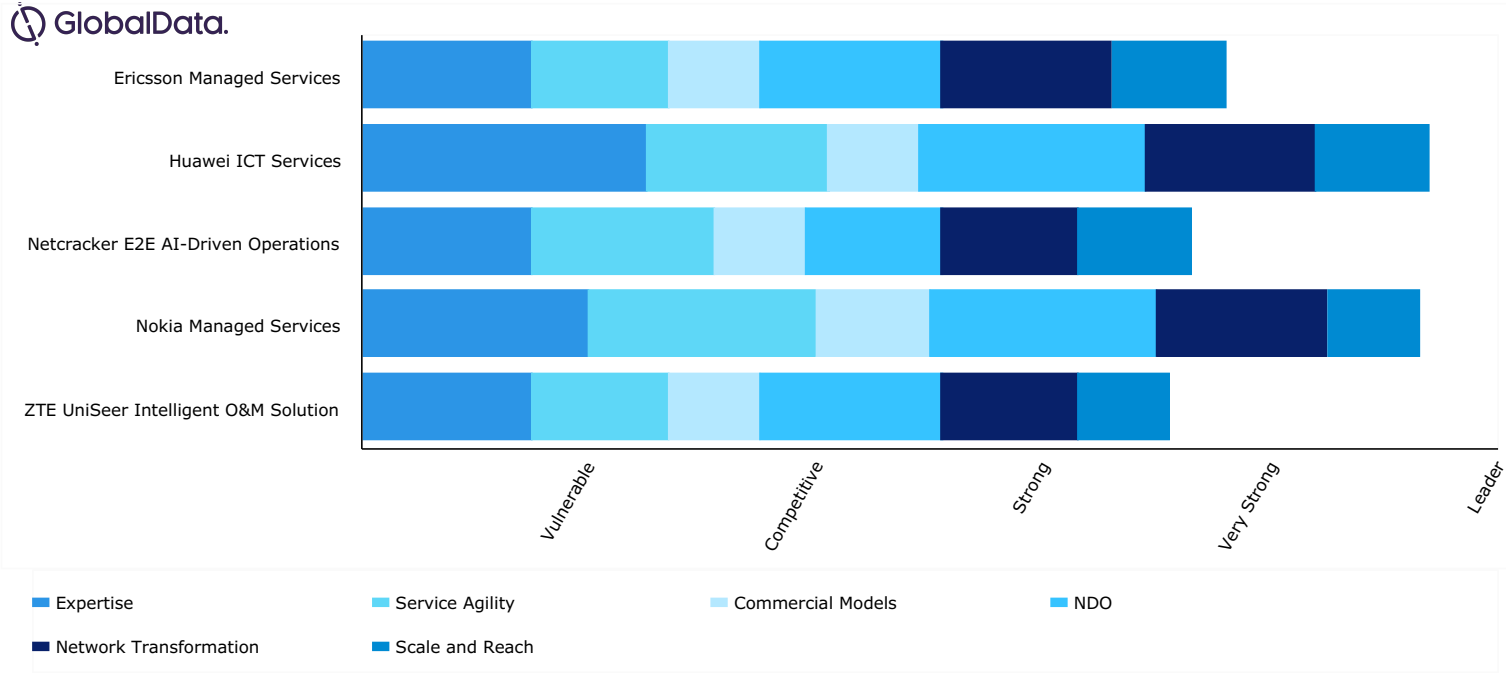
GlobalData.

# Managed Infrastructure Services for Telcos: Competitive Landscape Assessment

Andy Hicks | May 14, 2025

## Product Class Scorecard




## Market Overview

| | |
|---|---|
| **Product Class** | Managed Infrastructure Services for Telcos |
| **Market Definition** | This product class evaluates outsourced operations portfolios of vendors that cover networks and IT environments at communications service providers. Specifically, it covers network operations, data centers, public cloud resources, services, and applications as well as network design and optimization (NDO).<br><br>Because network and IT domains are increasingly interpenetrating, GlobalData evaluates heritage IT and heritage network vendors against the same set of criteria.<br><br>Managed infrastructure contracts must deliver OpEx savings, strong technical performance, and – often – transformation of the infrastructure that it being managed. To do so, they must handle the complex demands of open, virtual, and cloudified networks; network slicing; and edge computing. These challenges require a progressively higher degree of end-to-end automation.<br><br>Managed infrastructure services providers must also assist the telco with service agility. This can include recruitment and/or management of service partner ecosystems, training and retooling in CI/CD, white-labeled services, and joint service development. |
| **Rated Competitors** | • Ericsson Managed Services |

| | |
|---|---|
| | • Huawei ICT Services<br>• Netcracker E2E AI-Driven Operations<br>• Nokia Managed Services<br>• ZTE UniSeer Intelligent O&M Solution |
| **Additional Competitors** | • Amdocs |
| **Changes Since Last Update** | • April 2025: This report update adds a new metrics category for network transformation as well as additional metrics for the number of managed carriers employing hyperscaler infrastructure, ESG management, and generative AI. It has dropped metrics on percentage of virtual/cloudified networks, hybrid network percentage, edge computing, and NFV/SDN readiness.<br>• March 2025: Zain KSA announced that it had completed a three-year digital transformation with Netcracker. The deal involved swapping legacy BSS ad OSS for Netcracker's software suite, much of it delivered on a managed services basis.<br>• March 2025: Huawei launched a series of AI-based products and services at Mobile World Congress 2025, including network transformation services based on its Telecom Foundation Model approach.<br>• January 2025: Nokia moved its managed services business from its Cloud and Network Services business group to its Mobile Networks group. Cloud and Network Services will now focus more on as-a-service offerings and API-based service exposure. In March 2025, Nokia recast its 2024 financial statements to reflect this change. They indicate that Nokia's managed services business earned roughly 433 million euros in 2024.<br>• January 2025: Ericsson fully launched Aduna, the joint venture with CSPs that it announced in September 2024. Aduna provides worldwide coverage for CAMARA API-driven use cases. In addition to the company name, Ericsson also announced former Vonage COO Anthony Bartolo as CEO.<br>• December 2024: ZTE won the Asia Best Digital Transformation Award at the 2024 Telecom Review Excellence Awards for its intelligent Operations and Management (O&M) services. These services are underpinned by ZTE's VMAX big data platform. |

## Market Assessment

In the last year, the managed infrastructure services market for telcos has remained virtually flat in terms of carriers and customers served. The metaphor of the swan applies here, however: while the visible motion seems placid, there is hectic activity under the surface.

Many elements are making telecoms infrastructure more complex: the increase in 5G Standalone networks, IoT, cloudification, Open RAN, and a growing role for hyperscale cloud providers, to name a few. Artificial intelligence is penetrating more and more operational use cases, which in turn requires data unification and management. Energy efficiency continues to be a focus. Farther into the future, telecoms will be more intent-driven, and CAMARA-based APIs will create an ecosystem with myriad ecosystems and partners to be managed.

Communication service provider (CSP) customers continue to renew their existing managed operations contracts, but are adding additional responsibilities in many of the areas we name above. They are generally not, however, choosing to outsource the operations and transformation of additional infrastructure domains. For most telcos, these as-yet-to-be-tapped domains are on the IT side: application operations and IT infrastructure.

Many CSPs view these areas as potential sources of competitive differentiation as well as areas where they need to retrain their staff to fully understand the associated opportunities and operational needs. History suggests that many CSPs will continue to manage these operations internally until they are mature enough to be outsourced or, alternatively, the demands prove more than the CSP can handle. They will then need to put their IT operations in the hands of a company that can bring the operations up to the state of the art.

Managed operations vendors, meanwhile, are increasing their efficiency and agility of their customers with digital tools like predictive AI, generative AI (GenAI), digital twins, and prepackaged service components. Meanwhile, these providers are readying their systems for the eventual new wave of operations demand while adding capabilities to their existing relationships.

Each vendor in this class has one or more areas of 'special sauce,' from managed security services to a focus on intent-based networking to new algorithms that detect underserved mobile users and route them to adjacent cells. All are shifting their contracts from technical to business KPIs: customer experience and service quality have become essential industry concerns. Combined with the cloudification of networks, this focus on services and experience incorporates more and more IT functions, and so it requires more IT-centric management processes like CI/CD as well as extensive employee reskilling and process redesign.

NDO, meanwhile, has evolved from a relatively staid discipline to a central focus. Network and IT vendors alike are rolling out CapEx- and OpEx-reducing tools like site design standardization, digital twins, virtual drive tests, and AI-assisted modeling and field work. New frequency bands and beamforming capabilities require much more complex coverage planning, especially when it comes to indoor/3D coverage. Investment prioritization, network planning, and network construction are the subject of extensive work in analytics and automation.

## Market Drivers

• Predictive AI, GenAI, Agents, and Data Too: AI has been a part of network operations for years, but the recent explosion of interest in GenAI – and the incipient interest in agentic AI -- has spurred CSPs to reprioritize all types of AI in their operations. Managed services groups need to address these requirements as well as the data transformation and management that AI requires.

• 5G and O-RAN Complexity: 5G is accelerating adoption of edge computing, network slicing, network convergence, and network densification. O-RAN introduces a new software interface and brings multivendor management to the base station. Together, these factors are starting to create a dramatically higher number of services and network elements to manage. New network technology and capacity demands are also challenging NDO capabilities.

• Cloudification and Movement to Hyperscalers: Virtualized and cloud-native architectures create much larger shared resource pools, make root cause analysis more difficult, and replace time-tested hardware-based practices with IT management processes. Hyperscale clouds are becoming a larger part of telecoms networks via resource colocation and service collaboration. This creates challenges for service assurance, revenue assurance, service prioritization, and other operational functions.

• Autonomous Networks Looming: Most discussion in the telecoms industry is how to move networks to Level 4 autonomy, in which machines do most of the work. Meanwhile, most CSPs find themselves somewhere between Levels 2 and 3. They expect their operations partners to help them automate individual domains and integrate them into more autonomous networks.

• New Consumption Models: In an effort to sell their services to telcos less interested in classic outsourcing contracts, managed services providers are experimenting with models like selling individual AI use cases combined with operational consulting, managed AI functionality, or pay-as-you-go use of analytics applications. Their parent companies are also offering more functionality on an as-a-service basis as well.

• Intent Meets Digital Transformation: At its most fundamental level, digital transformation involves judging infrastructure by its ability to deliver business results, not just technical KPIs. Intent-based orchestration is bringing a similar shift to network operations.

## Buying Criteria

• Scale and Reach: Telco infrastructure blankets entire countries with complicated equipment supporting various technologies under demanding conditions. Managed services providers must have local legal entities, field force relationships, spare parts supplies, and regional expertise centers to mount a credible bid for any operations contract. Scale and coverage criteria, therefore, indicate not only existing success, but also relevance to other telcos in each region.

• Expertise: Telecoms infrastructure comprises networks, data centers, services, and applications. Increasingly, it also involves hyperscaler and other third-party resources. On top of that, operations personnel must grapple with security and regulatory concerns as well as emerging technologies and methodologies. Managed infrastructure providers must be able to handle all these areas, but also help their telco clients with their transformation efforts.

• Network Design and Optimization: As networks virtualize and densify, and as 5G introduces network slicing, beamforming, and new frequency bands, network design and optimization grow steadily more complex. Open RAN is also complicating network design and rollout. IT vendors are at some disadvantage in this category, but that disadvantage is shrinking as they grow increasingly sophisticated in the area. GlobalData has nevertheless designed the metrics in this area to be as even-handed as possible.

• Service Agility: This category measures how the vendor helps telcos bring more services to market, more rapidly. It covers joint innovation as well as B2B2X models. Increasingly, it also covers management of third-party partner ecosystems that can include public cloud partners, specialists in a given enterprise vertical, content providers, and other parties that provide service components to and through the operator.

• Commercial Models: While many operations contracts hew to the classic three-to-seven-year SLA-based model, telcos and vendors are also experimenting with more flexible relationship structures. As-a-service delivery, reward sharing, and project-based engagements are starting to enable smaller-scale, more innovative operational relationships than the standard contract structure. This category also measures providers' ability to retain customers.

• Network Transformation: Virtually no managed services contracts provide only for more efficient operation of the “as is” infrastructure. Rather, these contracts require progressive transformation of the underlying infrastructure with the twin goals of heightened efficiency and greater support for new and disruptive services.

## Vendor Recommendations

• Demonstrate Hyperscale Management Superiority: CSPs’ increased use of hyperscaler infrastructure and services often leads to increased direct relationships with those hyperscalers. Our research shows that CSPs find the hyperscalers easy to buy from and manage than traditional telco vendors. Since managed services providers will have to operate these hyperscaler resources in any event, they should try to make sure that they are the easiest for the CSP to deal with in order to preserve that customer relationship.

• Coordinate with Orchestration: Operations groups at some vendors collaborate more closely with their orchestration colleagues than at others. Since network resource and service orchestration is the first to deal with new demands posed by - for example - truly dynamic network slicing or quality on demand APIs, operations and orchestration should coordinate their efforts.

• Expand Your Addressable Market: Few telcos will sign substantial new outsourcing deals in the next few years. Vendors should expand their direct enterprise services, security services, B2B2X models, or granular as-a-service offerings to keep growing their business until 5G encourages a new wave of larger contracts.

## Buyer Recommendations

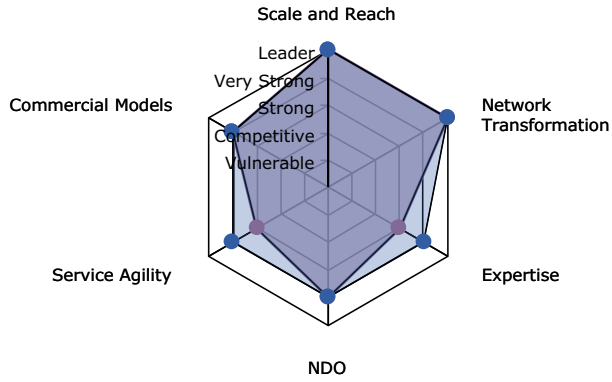
• Look for Differentiation: Any vendor in this report is capable of handling most operational requirements with a high degree of automation and sophistication. Each, however, has its own strengths. Come contract renewal time, CSPs should look to see if another vendor is especially strong in one of their strategic priorities.

• Make Security a Requirement: The industry now largely accepts that security must be designed into every area and process of telco operations. It must therefore be a central part of the contract discussion. Managed service providers are often also able to help telcos with B2B2X services for their own customers.

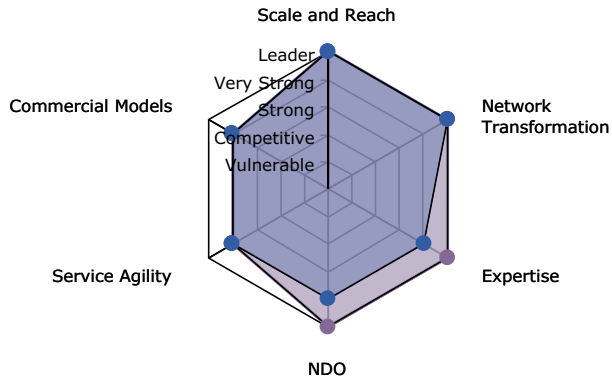
• Examine Your Ecosystem Needs: CSPs see many new possibilities to introduce new services, but do not have the staff or expertise to take full advantage of them. They should evaluate operations partners in part on how well they bring service partners to the relationship.

## Rated Competitors

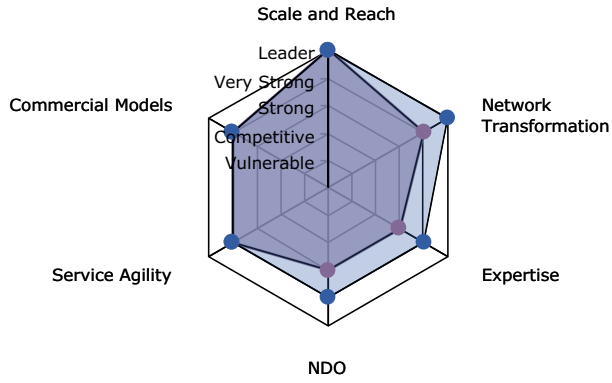
| | |
|---|---|
| **Product Name** | Ericsson Managed Services |
| **Current Perspective** | Ericsson continues to invest heavily in AI with an emphasis on closed-loop network automation. To fuel its customers' progress in AI, the vendor also has a strong practice in data transformation and management. It also offers a comprehensive energy-saving operations product (Ericsson Energy Infrastructure Operations) and has the strongest intent-based operations capability in the class.<br><br>Ericsson Managed Services is packaging most of its AI work as use cases in Ericsson Operations Engine, which now runs in more than 50% of managed services engagements. It has also applied AI to internal efficiencies, for example field force management, where it has achieved substantial improvement in "first time right" truck rolls.<br><br>The Swedish vendor’s development is uneven, however: especially on the Network Design and Optimization side, it has not introduced many new capabilities since last year’s update. It also shows few class-leading capabilities outside of its intent, predictive AI, observability, and energy capabilities. It remains a mature, experienced, and reliable managed services provider, but should focus on keeping up with new technologies and operational paradigms in order to maintain that position. |
| | |

| | |
|---|---|
| **Buying Criteria Rating** | Commercial Models : Very Strong<br>Expertise : Strong<br>NDO : Very Strong<br>Network Transformation : Leader<br>Scale and Reach : Leader<br>Service Agility : Strong |
| **Product Scores** | Very Strong<br>  |
| **Strengths** | • AI to Intent: Ericsson's heavy investments in AI/ML have led to the best intent-based operations capability in this class.<br>• Simplified Pricing Structure: Ericsson prices its managed services in a modular base pack (e.g., Ericsson Network Service Operations and Optimization), value pack (added services), and software pack structure.<br>• Transformation Scale: Ericsson has the second largest operations business in the report class and can address the largest and most complex transformation projects. |
| **Limitations** | • Few Pass-Through Service Offerings: Ericsson does little in the realm of B2B2X/pass-through services. These offerings are useful to expand CSP service portfolios, especially in cross-border services.<br>• Open RAN Immaturity: Despite Ericsson's giant December 2023 O-RAN deal with AT&T, its NDO and operational capabilities lag the leaders in this class.<br>• RAN Centricity: Ericsson's innovation is focused on mobile networks; its fixed and IoT network operations are somewhat less advanced. |

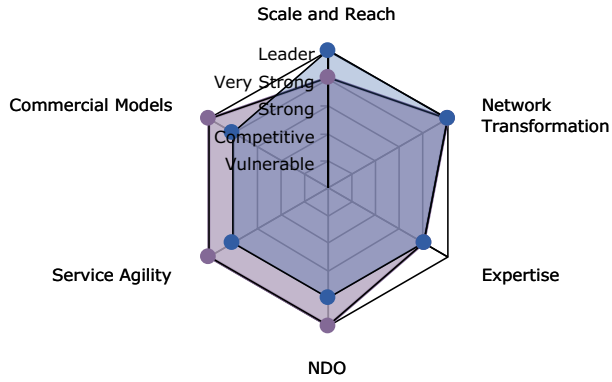
| | |
|---|---|
| **Product Name** | Huawei ICT Services |
| **Current Perspective** | Huawei's ICT services have the most subscribers under management and spend the most on R&D of any competitor in this class. Huawei is still growing parts of its business, especially in the private networks and IT operations. This growth is especially impressive given its effective exclusion from the North American and Western European markets.<br><br>Huawei serves its customers with the AUTIN and SmartCare portfolios, which are both based on the cloud-native Huawei General Digital Engine platform. The former focuses more on network-level operations, while the latter looks after customer experience. From the operations customer's standpoint, the distinction between the two is largely academic, since SLAs usually set both technical and customer experience targets. Huawei also provides managed services for the company's software products such as its BSS, AI Contact Center, and Mobile Money offerings.<br><br>Huawei's lavish R&D spending produces strong capabilities in areas like digital twins and analytics: its heavy investment in agentic capabilities and telecoms-specific large language models should reap benefits over the next few years. The company does not lead in every technology; however, due to geopolitics and internal strategic decisions, it is less advanced in operating networks that use hyperscaler resources and open RAN architectures. While it is excellent in supporting TM Forum Open APIs, it also lags its competitors in working with the more enterprise-focused CAMARA-based interfaces. |

| | |
|---|---|
| **Buying Criteria Rating** | Commercial Models : Very Strong<br>Expertise : Leader<br>NDO : Leader<br>Network Transformation : Leader<br>Scale and Reach : Leader<br>Service Agility : Very Strong |
| **Product Scores** | Leader<br>  |
| **Strengths** | •Incipient Growth in New Areas: Since our last assessment, Huawei has grown its customer base in IT managed services as well as private networks – albeit from a small base in both instances.<br>• R&D Commitment: Huawei continues to invest heavily in services. Its carrier network software and services division a double-digit percentage of its revenue in R&D.<br>• Multi-Country, Multi-Company: Huawei is mature in managing networks across national and organizational boundaries. |
| **Limitations** | • O-RAN Arrears: Although Huawei has extensive RAN planning capabilities, it does not focus on open RAN, potentially making it difficult for CSP clients that may choose to evolve to that technology.<br>• Operations Over Service Agility: Huawei does not offer as much help in service agility as some of its competitors, which provide more white-labeled, passthrough services and are more active with enterprise-focused, CAMARA-based APIs.<br>• Hyperscaler Weakness: CSPs are partnering with major public cloud providers to monetize edge services and transform their networks. While Huawei is adding some support in this area, it still lags its competitors in management of public cloud challenges. |

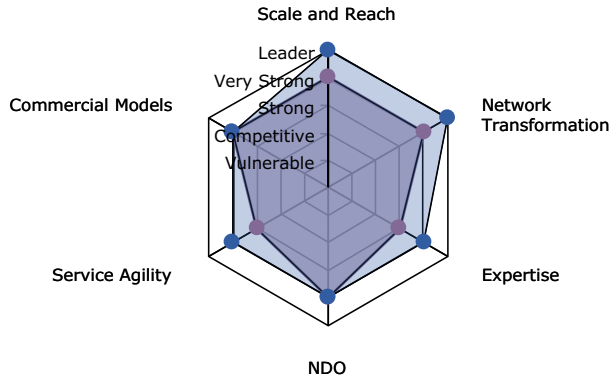
| | |
|---|---|
| **Product Name** | Netcracker E2E AI-Driven Operations |
| **Current Perspective** | Netcracker offers data center, network, customer care, and application operations. It places heavy emphasis on modern architectural and operational paradigms: cloud-native architecture, CI/CD, partner ecosystems, joint development, analytics, and automation. It has strong training and consulting offerings in IT and organizational transformation.<br><br>Netcracker continues to add network design and operations experience to its IT foundation. Sometimes with its parent company NEC, it has strengthened its capabilities in RAN, fixed, and satellite networks. It is expanding its experience in netco/servco and other multi-entity operations.<br><br>Netcracker also continues to offer Netcracker Business Cloud, which provides packaged and managed network services from third-party providers. Its security and privacy capabilities are some of the strongest in the class. It is adding customers across carrier types in both the network and IT domains and has a full range of public, hybrid, and multicloud managed services capabilities. |
| **Buying Criteria Rating** | Commercial Models : Very Strong<br>Expertise : Strong |

| | |
|---|---|
| | NDO : Strong<br>Network Transformation : Very Strong<br>Scale and Reach : Leader<br>Service Agility : Very Strong |
| **Product Scores** | Very Strong<br>  |
| **Strengths** | • Growing NDO Expertise: For a vendor that does not produce network equipment, Netcracker has substantial expertise in network design and optimization.<br>• GenAI Leadership: In the nascent but fast-developing area of telecoms GenAI, Netcracker's platform is currently the most mature in the area of telco operations.<br>• Breadth of Expertise: Netcracker has strong IT operations experience across a range of carrier types, including satellite and cable. This breadth compensates for a smaller overall client base than some competitors. |
| **Limitations** | • Orchestration vs. Operations: Netcracker devotes substantial resources to its network service and resource orchestration but does not always immediately incorporate these advances into its managed services capability. CSPs should ask about this when considering a new operations partnership.<br>• Uneven Network Design Credentials: While it has improved its network design and optimization capabilities since the last report, Netcracker is understandably less advanced in NDO overall than its network equipment providers competitors.<br>• NEC Availability: Especially in network planning and rollout, Netcracker uses some resources from parent NEC. CSPs should make sure those capabilities are available in their markets. |

| | |
|---|---|
| **Product Name** | Nokia Managed Services |
| **Current Perspective** | Nokia's network operations services have often been earlier than their peers in rationalizing contracts, driving efficiencies through AI and quality methodologies, and experimenting with applying webscale models to carrier operations. Only its de-emphasis of IT application operations prevents Nokia from being a fully end-to-end managed infrastructure provider.<br><br>Nokia retains its lead in IoT and private wireless planning and operations, most notably with its global sore SaaS project. A quarter of its managed networks are large-scale enterprise implementations like factories, ports, mines, and campuses. This experience will stand it in good stead as more carriers implement 5G standalone and serve increasing numbers of enterprise use cases and SLAs. Nokia’s supplier and partner ecosystem management is commensurately strong.<br><br>Nokia's managed security services for CSPs lead the class. Its NDO services are also robust. Nokia also demonstrates maturity in newer delivery models like SaaS and service/operational overlays. |
| **Buying Criteria Rating** | Commercial Models : Leader<br>Expertise : Very Strong<br>NDO : Leader |

| | |
|---|---|
| | Network Transformation : Leader<br>Scale and Reach : Very Strong<br>Service Agility : Leader |
| **Product Scores** | Leader<br>  |
| **Strengths** | • Advanced in Emerging Technology: Nokia tends to adopt new technology models earlier than competitors. It currently leads in O-RAN functionality and security services.<br>• Private Network Leadership: Nokia committed to enterprise networking earlier and has more experience in dedicated networks than its peers.<br>• Partner Ecosystem Expertise: Nokia's supplier and partner ecosystem has made strides in efficiency and efficacy. It has long ecosystem creation and operation experience in this area thanks to its WING global IoT network. |
| **Limitations** | • AI Dead Heat: Nokia's previous lead in some advanced areas like digital twins and AI applications has effectively vanished as competitors increase investment.<br>• IT Vulnerabilities: Nokia is weaker in IT application management than in other areas, which prevents it from being an end-to-end infrastructure management partner for CSPs that want a unified network/IT supplier.<br>• Tough Intent Competition: All managed service providers in the class are working on incorporating intent into their operations business; Nokia must continue to invest to stay in the game. |

| | |
|---|---|
| **Product Name** | ZTE UniSeer Intelligent O&M Solution |
| **Current Perspective** | ZTE has solid capabilities in support, maintenance, network operations, and manages multivendor environments in most of its carrier engagements. It has experience in managing very large IoT, private network, and government infrastructure deployments from its home market of China. It has the second largest managed services R&D staff in the class.<br><br>Although it operates at a smaller scale than its network operations competitors, ZTE has established expertise in network design, construction, and optimization, and runs an extensive network of R&D and joint development centers related to services. Its IT infrastructure management is among the strongest in its peer group. It leads the managed services class in private network and enterprise managed services. ZTE has extensive technology experience in network slicing and autonomous networks, but has less of a story to tell about how its managed services division can help in implementing and commercializing these capabilities. |
| **Buying Criteria Rating** | Commercial Models : Very Strong<br>Expertise : Strong<br>NDO : Very Strong<br>Network Transformation : Very Strong<br>Scale and Reach : Very Strong |

| | |
|---|---|
| | Service Agility : Strong |
| **Product Scores** | Very Strong<br>  |
| **Strengths** | •Private Network Expertise: ZTE has extensive experience designing and operating networks for major installations like ports, mines, and large government facilities. It can use this experience to help CSPs that wish to do the same.<br>• Datacenter Operations Expertise: With work for both telco and government clients, ZTE has extensive experience in large-scale data center infrastructure management. This experience will stand it in good stead as edge computing and 5G make data center operations ever more central to telecoms services.<br>• Large Scale Expertise: ZTE has a strong history in network design and construction; its Chinese networks in particular show that it can deploy and manage large-scale networks. |
| **Limitations** | • Lack of Security Services: While ZTE has strong internal security governance, it has yet to develop a set of security services that it can offer to its managed services customers.<br>• API Limitations: ZTE has rich experience with TM Forum's Open APIs. It still has less expertise in the CAMARA/Open Gateway interfaces that represent a new monetization hope for most operators.<br>• Intent Still to Come: ZTE is not as advanced as some of its competitors in the emerging area of intent-based operations. |